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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,864	10/17/2003	Carrie Delcomyn	1080	9573

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DINSMORE & SHOHL LLP  
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SUITE 600  
CHARLESTON, WV 25301

EXAMINER
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DELCOTTO, GREGORY R

ART UNIT	PAPER NUMBER
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1796

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01/11/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/687,864

Applicant(s)

DELCOMYN ET AL.

Examiner

Gregory R. Del Cotto

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 October 2007.
- 2a) ☒ This action is **FINAL**.      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4,8,9,11,29-34,36-41,48 and 50-56 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

- 5) ☒ Claim(s) 53-56 is/are allowed.

- 6) ☒ Claim(s) 1,2,4,8,9,11,29-34,36-41,48 and 50-52 is/are rejected.

- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.

- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. Claims 1, 2, 4, 8, 9, 11, 29-34, 36-41, 48, and 50-56 are pending. Claims 3, 5-7, 10, 12-28, 35, 42-47, and 49 have been canceled. Applicant's arguments and amendments filed 5/17/07 have been entered.

### Objections/Rejections Withdrawn

The following objections/rejections set forth in the Office action mailed 5/17/07 have been withdrawn:

None.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical

Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 2, 4, 8, 9, 11, 11, 29-34, 36-41, 48, and 50-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choy et al (US 6,046,150) in view of McNeil et al (US 5,403,549).

Choy et al teach a liquid cleaning or bleaching composition. See Abstract. Suitable peroxygen sources may be monopersulfates, etc. See column 5, lines 1-40. Surfactants may also be used in the compositions and include ethoxylated phenols containing 8 to 16 carbon atoms and averaging 1.5 to 30 moles of ethylene oxide per mole of alcohol. See column 6, lines 35-69. When the composition is used as a hard surface cleaner, alkaline buffers may be used including alkali metal carbonates. See column 7, lines 45-69. Hard surface cleaners include grout cleaners, bathroom and kitchen cleaners, etc., which may remove mildew, mold, and other typical stains found on such surfaces. Note that, the Examiner asserts that cleaning hard surfaces and removing bacteria, mold, etc. as taught by Choy et al would fall within the scope of decontaminating materials contaminated with biological warfare agents. Furthermore, solvents may also be used in the compositions and include isopropanol, ketones, etc. See column 10, lines 5-45.

Additionally, Choy et al teach that in a preferred embodiment of a hard surface cleaner delivery, a dual chambered container/dispenser is preferred. One chamber contained an H<sub>2</sub>O<sub>2</sub>/MMA solution at an acidic pH. The other chamber contained agents to adjust the pH to the optimum level, namely, an alkaline buffer and optionally,

a surfactant. Other agents could be included for improved cleaning performance. The preferred delivery is a trigger sprayer which must blend the two solution/fluids from the two chambers prior to delivering the combined solutions as a spray. The could be accomplished by either a mixing chamber, or by directing two fluid streams to a common target point by means of a diverter or other redirection means. Further, it is common to include in the hard surface cleaners at least one solvent to further enhance cleaning performance and to disperse hydrophobic or poorly soluble materials into the liquid cleaner. See column 11, lines 1-60 and column 13, lines 45-69. Note that, the Examiner asserts that Choy et al clearly suggest dual chamber containers in which one side contains an H<sub>2</sub>O<sub>2</sub>/MMA solution while the other chamber may include surfactants, colorants, solvents such as a ketone, etc., which would allow the monopersulfate compound and ketone to be mixed in-situ and generate dioxirane. The pH of the composition may range from 0 to 10 depending upon the intended use of the composition. See claim 17.

Choy et al do not teach the use of acetone or a composition containing a monopersulfate compound, a carbonate or bicarbonate, a ketone, a cosolvent, and the other requisite components of the composition in the specific proportions as recited by the instant claims.

McNeil et al teach a method and a composition for disinfecting matter or materials such as medical instruments, operating rooms, examining tables, walls, windows, floors, solutions, porous substances, and the like contaminated with bacterial, bacterial spores, fungi, or viruses. The composition contains a fluid mixture containing

a peroxymonosulfate salt and a carbonyl-containing compound and reaction products thereof. The carbonyl containing compound is particularly selected from the group consisting of acetone, 2-pentanone, 4-hydroxy-4-methyl-2-pentanone, etc. Additionally, surfactants may also be used in the compositions. See column 6, lines 10-25.

Additionally, McNeil et al teach that the use of a commercially available buffer does not interfere with the activity of the dioxirane containing reaction product. See column 12, lines 50-69. Also, Example 2 states that mixing caroate with a ketone in the presence of a small amount of buffer yielded no bacterial growth which is desirable. See column 11, lines 45-69.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to use acetone in the composition taught by Choy et al, with a reasonable expectation of success, because McNeil et al teach the use of acetone in a similar disinfecting, hard surface cleaning composition and further, Choy et al teach the use of ketones as solvents in general.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made to decontaminate materials contaminated with viruses by using a composition containing a monopersulfate compound, a carbonate or bicarbonate, a ketone, a cosolvent and the other requisite components of the composition in the specific proportions as recited by the instant claims, with a reasonable expectation of success, because the broad teachings of Choy et al in combination with McNeil et al suggest decontaminating materials contaminated with viruses by using a composition containing a monopersulfate compound, a carbonate or bicarbonate, a ketone, a

cosolvent, and the other requisite components of the composition in the specific proportions as recited by the instant claims.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 2, 4, 8, 9, 11, 29-34, 36-41, 48, and 50-52 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 8, 10, 12-23, 25-27, 34-36, and 38-43 of copending Application No. 10/693194. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 8, 10, 12-23, 25-27, 34-36, and 38-43 of 10/693194 encompass the material limitations of the instant claims.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to formulate a composition containing a monopersulfate compound, a carbonate-type buffer, ketone, and the other requisite components of the composition in the specific proportions as recited by the instant claims, with a reasonable expectation of success, because claims 8, 10, 12-23, 25-27, 34-36, and 38-



43 suggest a composition containing a monopersulfate compound, a carbonate-type buffer, ketone, and the other requisite components of the composition in the specific proportions as recited by the instant claims. Note that, a dioxirane compound as recited by claims 8, 10, 12-23, 25-27, 34-36, and 38-43 of 10/693194 would suggest a composition containing a persulfate and ketone such as acetone since dioxiranes form from combining a persulfate and ketone such as acetone.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Allowable Subject Matter***

Claims 53-56 are allowed.

None of the references of record, alone or in combination, teach or suggest a composition "consisting of" the specific combination of components as recited by the instant claims.

***Response to Arguments***

With respect to Choy et al, Applicant states that the compositions of Choy et al fail suggest or achieve the requisite in situ generation of dioxirane. Furthermore, with respect to Choy et al, Applicant states that solvents such as ketone are disclosed as providing a suitable liquid medium for the inventive N-alkyl ammonium acetonitrile compounds and in the circumstance when both a monopersulfate is selected as a peroxygen source, and ketone is selected as a solvent for the MMA ingredient, dioxirane, to the extent it is generated at all, is generated immediately and not in-situ as required by the instant claims. Further, Applicant states that even if one skilled in the

art were to use a ketone such as acetone in the compositions taught by Choy et al and these ketones reacted with the oxygen bleach, it would destroy the purpose of Choy by failing to generate peroxyimide acid which is generated from the reaction of MMA with peroxysulfate. In response, note that, as stated above, the Examiner asserts that Choy et al clearly suggest dual chamber containers in which one side contains a bleach/MMA solution while the other chamber may include surfactants, colorants, solvents such as a ketone, etc., which would allow the monopersulfate compound and ketone to be kept in separate containers, be mixed in-situ and generate dioxirane at the site. Each side of the container may contain a liquid carrier such that one side contains water as the carrier and the other contains a mixture of water and a solvent such as ketone. Additionally, while the Examiner recognizes that the use of acetone may compete with the MMA of Choy for reaction with the peroxosulfate compound, the instant claims are open to any amount of solvent and dioxirane such that a small amount of a ketone such as acetone used in the composition taught by Choy would not interfere to a large extent of the MMA's ability to react with the peroxosulfate and would fall within the broad scope of the composition as recited by the instant claims. Furthermore, the generation of some dioxirane in the composition as disclosed by Choy et al would be desirable due to its ability to disinfect various hard surfaces as evidenced by McNeil et al.

Additionally, with respect to the rejection of the instant claims under 35 USC 103 using Choy et al in combination with McNeil, Applicant states that McNeil teaches away from the instantly claimed compositions by teaching away from buffers in all but highly acidic formulations. Further, Applicant states that neither reference teaches or suggests

the inclusion of the presently requisite carbonic-based buffer in dioxirane-generating compositions. In response, first note that, as stated previously, the instant claims do not require any particular amount of buffer and are open to any amount of buffer.

Additionally, the instant claims encompass compositions which do have an acidic pH anywhere between about 5 to 7. Thus, the instant claims encompass compositions which contain a buffer but overall have an acidic pH.

Additionally, the Examiner maintains that McNeil et al do teach compositions which contain buffer in combination with acetone and peroxydisulfate and yielded no bacterial growth (Example 2 and Example 4) which provides motivation to use a buffer in combination with the acetone and peroxydisulfate. Note that, Example 4 states that a commercially available buffer in combination did not interfere with the activity of the dioxirane reaction product. McNeil et al is a secondary reference relied upon for its teaching of acetone in a similar bleaching/disinfecting composition. The Examiner maintains that one of ordinary skill in the art clearly would have been motivated to use acetone in the composition taught by Choy et al, with a reasonable expectation of success, because McNeil et al teach the use of acetone in a similar disinfecting, hard surface cleaning composition and further, Choy et al teach the use of ketones as solvents in general. Further, the Examiner maintains that the teachings of Choy et al in combination with McNeil et al would suggest compositions having the same pH as recited by the instant claims because Choy et al in combination with McNeil et al suggest compositions containing the same components in the same amounts as recited by the instant claims.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory R. Del Cotto whose telephone number is (571) 272-1312. The examiner can normally be reached on Mon. thru Fri. from 8:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on (571) 272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Gregory R. Del Cotto  
Primary Examiner  
Art Unit 1796

GRD  
January 7, 2008